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ABSTRACT

The major objective of this pilot survey was to pretest questions for use in the development and design of a larger, more definitive survey of residents of rural communities in Appalachia, planned for the spring of 1981, and to obtain preliminary descriptive data about the area's residents. Telephone interviews covered respondents' family characteristics and attitudes toward their communities and potential new energy developments. Complete, usable interviews were obtained from 129 of the 151 residents contacted (87%). Limitations included the small sample size and the fact that respondents were exposed to much publicity and controversy after interviewing was concluded. Those favoring the energy industries comprised 72%, while 13% opposed and 14% "didn't know." When characteristics of those favoring the industries were compared with those opposing such industries, it was found that older respondents, those with less education, larger families, and lower incomes tended to favor the industries, while respondents who were younger, had more education, smaller families, and higher incomes tended to oppose the establishment of the industries. A larger survey has been planned to determine more definitive relationships relative to these preliminary findings and furnish data useful to others in the field of social impact assessment of energy developments. (AN)

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A PILOT SOCIOECONOMIC SURVEY OF THE IMPACT AREA OF ENERGY-RELATED INDUSTRIES PROPOSED FOR MONONGALIA COUNTY, WEST VIRGINIA

West Virginia University
Agricultural and Forestry
Experiment Station

Circular 118
February 1981

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SUMMARY

As a part of a long-term study of the impacts of energy-related developments on rural communities in Appalachia, a pilot socioeconomic survey of residents of the Monongalia County, W.Va. area was conducted in the Summer of 1980. The major objective of this pilot survey was to pretest questions for use in the development and design of a larger, more definitive survey of the area's residents planned for the Spring of 1981 and to obtain preliminary descriptive data about the area's residents. The methods, results, and research implications of the pilot survey are discussed in this report, whose main purpose is to share our research methods and findings with other social impact assessment researchers.

During the mid-May to mid-July, 1980 time period, telephone interviewers contacted residents selected from the Monongalia County area by systematic sampling procedures. The interviewers asked questions about the respondents' family characteristics, their attitudes toward their communities, and their attitudes toward potential new energy developments proposed to be located in the area (i.e., the SRC II Plant, the Round Bottom Coke Plant, the Core Industrial Park, and the coke plant in Fairmont, W.Va.). Completed interviews were obtained from 129 of the residents contacted. This is a relatively small sample size and to be statistically conservative, the proportions estimated from the sample must be bracketed with plus and minus 10 percent to have 95 percent confidence that the proportion for the general population lies within the bracketed range.

It is also important to remember that the results of this survey are "time-specific"--that is, they reflect respondent's knowledge levels and

personal conditions at the time of the survey. The residents of this area have been exposed to much publicity and controversy and much new information related to the proposed industries since the interviewing was concluded in July. Therefore, these data may not be accurate reflections of how these respondents would feel if they were asked these same questions today. With recognition of the above qualifications, the data does provide a description of the demographic characteristics, perceptions, and attitudes of the residents of the study area.

The survey data were tabulated in terms of four main categories: (1) the demographic characteristics of respondent families; (2) respondent attitudes toward the potential energy related industries; (3) respondent assessments of the study area; and (4) respondent satisfactions with local services. The respondents were heterogeneous in terms of their familys' characteristics. A full range of types of employment and a wide range of family income levels were reported. About 22 percent of the respondents were in the 19-25 years age category which was proportionate to the 22 percent of the respondents reporting their age to be 60 years or older. Sixteen percent of the respondents had a household size of one person while 27 percent reported a household size of 4 or more persons--the average household size was 2.8 persons. Seventy-one percent of the respondents owned their home while 28 percent rented their home. About 37 percent of the respondents had lived in their county of residence for 10 years or less and 40 percent had been residents of their county for 31 years or more. About 20 of the respondents had less than a high school education, 33 percent had a high school education, 26 percent had some college, and 21 percent had a college degree. It should be noted that because of the timing of the survey, there were very few full-time West

Virginia University students included among the respondents. Students will be included as a special category in the planned larger survey. Their characteristics and attitudes are important to socioeconomic impacts on the area, but should be surveyed separately within the context of their usual transitory residence in the area.

Respondents were asked whether they were in favor of or opposed to the establishment of the energy-related industries in the area. The question was asked in reference to all of the proposed industries as a group, therefore, any inferences from the responses to any specific industry in the group would be inaccurate (In the larger survey, it is planned to assess attitudes toward specific industries). Seventy-two percent of the respondents indicated they favored the establishment of the energy industries, 13 percent opposed the industries, and 14 percent indicated they "don't know." In terms of the expected effects of the proposed industries on their communities, 74 percent of the respondents indicated "more jobs," while "improved economy" and "pollution" were indicated by 35 percent and 31 percent of the respondents, respectively.

The majority of the respondents were "proud" of their local community (59 percent), but 14 percent were "not very proud." "The rural atmosphere and peacefulness" (43 percent) and "friendly, helpful people" (27 percent) were the two positive attributes of the local area most often mentioned by the respondents. Most of the respondents felt that their local area is a "good" place to raise children, but 27 percent of the respondents indicated that they felt that the area was "bad" for that purpose. The problems in the community most often mentioned were "parking/traffic," "roads," "vandalism/crime," and "housing/rentals."

In terms of satisfaction with local community services, the respondents were most satisfied with ambulance services, medical services, garbage collection, and fire protection. They were least satisfied with traffic control and road maintenance. Part of this dissatisfaction might have been associated with the traffic congestion at the time of the survey due to the construction of the new WVU football stadium and access roads in Morgantown.

When the characteristics of the respondents who favored the energy-related industries were compared with those who opposed such industries it was found that older respondents, those with less education, larger families, and lower incomes tended to favor the industries, while respondents who were younger, had more education, and had smaller families and higher incomes tended to oppose the establishment of the industries. Because of the small sample size, the above generalization is not statistically conclusive, but like many aspects of this pilot study it allows for refinement of the larger study's survey instrument. The larger survey will seek to determine more definitive relationships relative to the many preliminary findings of this pilot study.

INTRODUCTION

This paper reports the results of a pilot sample survey of people living near the site of several proposed energy development projects in northern West Virginia. The intention is to present--before construction of any of the development projects actually begins--certain socioeconomic and attitudinal data that can be obtained only by personal interviews with the people to be affected.

The research focuses particularly on the primary impact area surrounding a proposed demonstration coal liquefaction plant (SRC II) in the Fort Martin area of Monongalia County, West Virginia. The plant is to be operated by Gulf Oil Corporation and will be financed by the governments of the United States of America (through the Department of Energy), Japan, and the Federal Republic of Germany.[1] A number of other energy developments have been proposed for the study area, including a coking plant at Round Bottom (south of Morgantown), an industrial park near Core, W.Va., and a coking plant in Fairmont, W.Va.[2]

The purpose of this pilot survey is both to provide descriptive data of the impact area and to serve as a pretest of a survey instrument which, after refinement, will be used on a larger, more representative sample of the population area. This larger survey, to be conducted before the construction of the SRC II plant begins, will allow us to assemble a baseline profile of the demographic and attitudinal charac-

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[1]U.S. Department of Energy, "Draft Environmental Impact Statement. Solvent Refined Coal-II Demonstration Project." May 1980. p. 1-1.

[2]Robert Pasley. "Industrial Development Grows Apace." The Dominion-Post. Morgantown, W.Va., February 13, 1980.

teristics of residents of the impact area. This baseline profile will allow us to monitor changes in these characteristics that occur during the construction and demonstration phases of the SRC II plant.

The pilot survey was conducted from May 17 to July 19, 1980. At the time of the survey, the proposed energy developments had been the object of much discussion in the local media. In May of 1980, while the survey was being conducted, the Draft Environmental Impact Statement for the SRC II plant was released to the public, who were invited to discuss the statement during open meetings on July 1, 2, and 3, 1980 in Morgantown.[1] As of this writing, actual ground breaking for the SRC II plant is tentatively set for Spring 1981.[2]

Many events related to these proposed industries have taken place since the collection of these data, and these events have been the subject of much publicity and controversy in the local media. In fact, "the continuing plans and controversies over the SRC II plant and the proposed coke plant at Round Bottom" were designated by Morgantown's local newspaper, the Dominion-Post, as the third top story of 1980.[3] In other words, the residents of this area have been exposed to much publicity and controversy and much new information related to the proposed industrial developments since the interviewing was concluded in July. Therefore, it is important to keep in mind that the data presented here reflect attitudes and options that were held by respondents based on the information

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[1]The Dominion-Post. Morgantown, W.Va., June 22, 1980.

[2]Paslay, Robert. "Industrial Development Grows Apace." The Dominion-Post. Morgantown, W.Va., February 13, 1980.

[3]The Dominion-Post. Morgantown, W.V., January 4, 1981.

they had last summer, and may not be accurate reflections of how these respondents would feel if they were asked these same questions today.

METHODS AND DATA

The study area for this research coincided with what is believed to be the primary impact area of the SRC II plant.[1] This comprises the Morgantown area (including Westover, Granville, Star City, Blacksville, Osage, and environs in Monongalia County), the area of Mount Morris, Pa. which is served by the Morgantown telephone exchange, and the borough of Point Marion (Fayette County, Pennsylvania).

Respondents were chosen by systematic disproportionate stratified sampling from area telephone listings. In this area, telephone directories are a good sampling frame. Unlike urban areas, few telephone numbers are unlisted, and unlike some very rural areas, few residents are without a telephone.

The Morgantown telephone directory includes listings for Mount Morris (W.Va. portion), Laurel Point, W.Va., and Point Marion, Pa., as well as for the Morgantown area. Since these three areas were to be included in the sample, and since the population of these areas is so small in comparison with the Morgantown area, it was decided to oversample the residents of Point Marion, Mount Morris and Laurel Point so that there would be an adequate number of responses from these areas to allow separate and comparative analysis when necessary. When the entire sample is analyzed together, as it is in this report, the responses from the three

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[1] U.S. Department of Energy, "Draft Environmental Impact Statement: Solvent Refined Coal-II Demonstration Project." May, 1980. p. 3-2.

outlying areas are each given a weight of .5 to compensate for the disproportionate sampling. This weighting technique ensures that responses are distributed in proper proportion to the real population so that the sample is not geographically biased. Therefore, tables presented in the analysis section include totals that are not equal to the total number of respondents interviewed.

A limitation of the sample is related to the timing of the study. The survey was conducted during the summer months when many area residents are on vacation. Interviewers did make several attempts at different hours and on different days of the week to contact each household. University students make up a substantial portion of the local population but often leave the area for all or part of the summer. However, student nonresponse does not damage the integrity of the sample. To the degree that we are most interested in learning about the relatively permanent local community, there is good reason to examine students and nonstudents separately. The majority of the University students in the area do not remain in the immediate locale after completing their education, nor do they have the same investment in the social and economic life of the community since they less often buy homes, raise children, or take full-time employment than do less transient members of the community. Student opinions are important and should be assessed, but students are sufficiently different from the bulk of the nonstudent community that their opinions and beliefs will not be adequately represented unless they are surveyed separately. In the larger social survey, students will be administered a separate questionnaire.

Of 239 sample residential telephone listings, interviewers were not able to contact 88, even after repeated attempts. Since the local telephone directory is published in November, and since the completeness of all city telephone directories begins deteriorating rapidly even before subscribers receive their copies, especially in a university community with a large transient population, the substantial proportion of "can't contact" is not surprising. It is reasonable to assume that a large proportion of these potential respondents are students who had returned to their home towns or had gone elsewhere. Of those listings where a respondent was contacted, the completion rate was 87 percent. Interviewers successfully completed 132 interviews, of which three were not usable. This leaves 129 complete, usable interviews of which this report presents results.

Overall, the sample is reasonably representative of full-time residents of the Morgantown area. As in many telephone surveys, women and unemployed respondents are probably overrepresented, but inferences are still possible. Many of the variables reported here rely on the respondent as an informant for the household. For example, it makes little difference whether the husband or wife provides the interviewer with information on family income, whether the home is rented or owned, and the like. For attitude questions, such as those described in the following section of this paper, bias could make a difference, but women and men do give similar answers to most attitude questions other than those involving domestic sex roles. For example, in various Gallup polls conducted in 1980, the average percentage difference between males and females was 4.5 percent for 30 attitude items covering a wide variety of social

issues.[1] As discussed in subsequent sections, one central attitude measure--favor or oppose local energy developments--shows very small sex differences. It is likely that the survey, like others in the past, will not find that women and men respondents hold very different attitudes about subjects outside the sphere of domestic sex roles. In other words, for assessing perceptions of energy development, community services, and quality of life, it may be that either the male or female head of household can be queried without much sample bias. In the larger study for which the present survey was a pilot, attitude questions will be disaggregated by sex to control for this potential bias of telephone surveys.

A word of caution about the sample size: 129 cases dc not permit precise inferences from sample to population, particularly where some sampling bias is possible. To be scientifically conservative the estimated dichotomous proportions must be bracketed with plus and minus 10 percent to have 95 percent confidence that the true figure lies within the bracketed range. For example, if 55 percent of the sample said it approved of proposition X, the percentage in the actual population will--we are 95 percent confident--fall somewhere between 45 percent and 65 percent. Confidence intervals for estimating dichotomous proportions in subsets of the sample will be larger than ten percent. Whenever small samples are used (say, less than 1,000 or 1,500 respondents) sampling errors are large, and results should not be reported as though they were highly accurate. For this reason we will not take our results as final. Nevertheless, these data do provide a preliminary description of demographic characteristics and attitudes and perceptions of the respondents in the impact area.

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[1] The Gallup Opinion Index. No. 174-180, 1980.

DESCRIPTION OF THE SAMPLE

This section describes the socioeconomic characteristics of the sample. Table 1 presents the percentage distribution of these data. More than two-thirds of respondents interviewed were female (69 percent), which is not surprising in a telephone survey which generally tends to overrepresent those more likely to be at home.

Most of the respondents were married (61 percent); however, only 5 percent responded that they were separated or divorced. This response is probably underrepresented because of the wording of the question. Rather than choosing between married, never married, separated/divorced, and widowed, respondents were simply asked what their marital status was. It is likely that some separated or divorced respondents answered "single" (This problem will be remedied in the larger survey, and it illustrates the usefulness of conducting a pretest on a survey instrument). Twenty-two percent of the respondents were single and 11 percent were widowed.

The median age of the respondents was 39 years, and the sample was fairly evenly distributed between younger and older adults (only persons 18 years or older were interviewed). Twenty-two percent of the sample was 18-25 years old and the same proportion was 60 years or older.

The mean number of children per household was 0.78 compared to the national average of 0.81 in 1979.[1] Correspondingly, the mean number

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[1]U.S. Bureau of Census. Current Population Reports, No. 345, Series P. 20. Washington, D.C.: U.S. Government Printing Office, March 1979.

Table 1. The Distribution of Demographic Characteristics of the Respondents

	Number[a]	Percent[b]
Sex		
Male	35	31%
Female	80	69%
Marital Status		
Married	71	62%
Single	26	22%
Separated/divorced	7	5%
Widowed	13	11%
Age		
18-25 years	26	22%
26-34 years	25	22%
35-49 years	16	14%
50-59 years	23	20%
60 years or older	25	22%
Number of children		
0	62	56%
1	26	24%
2	11	10%
3	9	8%
4	1	1%
5	2	1%
Number of Persons Living in the Household		
1	18	16%
2	37	34%
3	26	23%
4 or more	30	27%
Dwelling Type		
House	75	66%
Mobile home	16	14%
Apartment	20	18%
Townhouse/duplex	3	3%

Table 1. Continued

	Number[a]	Percent[b]
Own versus Rent Home		
Own	80	70%
Rent	32	28%
Length of Time Lived in County of Residence		
5 years or less	24	21%
6-10 years	18	16%
11-30 years	27	24%
31 years or more	46	40%
Length of Time Lived in State of Residence		
5 years or less	20	17%
6-10 years	3	2%
11-30 years	31	27%
31 years or more	62	54%
Education		
Less than high school	22	20%
High school diploma	38	33%
Some college	30	26%
College degree or more	24	21%
Male Employment		
Full-time	52	74%
Part-time	4	5%
Not employed	15	21%
Female Employment		
Full-time	26	36%
Part-time	7	10%
Not employed	37	54%
Male Occupation		
Professional, technical, managerial, administrative	22	35%
Sales, clerical, service	13	21%
Craftsmen, operatives	28	44%

Table 1. Continued

	Number[a]	Percent[b]
Female Occupation		
Professional, technical, managerial, administrative	14	34%
Sales, clerical, service	24	60%
Craftsmen, operatives	3	6%
Family Income		
$7,000 or less	26	23%
$7,001 to $11,000	15	13%
$11,001 to $15,000	15	13%
$15,001 to $20,000	23	20%
$20,001 to $30,000	16	14%
$30,001 or more	9	8%
Refused to answer	8	7%

[a]Total number of respondents does not sum to 129 due to the case weight factor.

[b]Percents may not sum to 100 percent due to rounding.

of persons per household was 2.8 with the modal households (34 percent) containing 2 persons.

Nearly two-thirds (66 percent) of the respondents lived in houses as opposed to mobile homes (14 percent), apartments (18 percent) or town-houses/duplexes (3 percent). Seventy percent owned their own homes while 28 percent rented their residences (two percent said "other"). These figures may reflect the lack of students represented in the sample; only 4 percent of the respondents were students.

Most of the respondents interviewed had been residents of their county for a long time. The mean number of years respondents had lived in their county of current residence was 27 years, with 40 percent having lived there for more than 30 years. The average length of time respondents had lived in the state is 33 years, with the majority (54 percent) having lived in the state for more than 30 years.

There was a wide range of educational attainment among the survey respondents. Twenty percent had less than a high school education, 33 percent had completed a high school education but had not attended college, 26 percent of the sample received some college education but did not have a college degree, and 21 percent had received a college degree. The high percentage of respondents with college attendance may be a reflection of the location of West Virginia University (WVU) within the sample area.

Three-fourths (74 percent) of the male respondents (or husbands of respondents) were employed full-time and 5 percent worked part-time. Twenty-one percent were not employed. In contrast, only 36 percent of the female respondents (or wives of respondents) were employed full-time.

In over one-half (54 percent) of the households where the respondent was married, both husband and wife were employed.

Occupations were grouped into three categories. About one-third of both females and males fell in the category of professional, technical, managerial, and administrative. Females were much more likely to be employed in sales, clerical, and service occupations than were males (60 percent versus 21 percent). Males dominated the category of craftsmen and operatives (44 percent compared to 6 percent for females).

Although income is generally a difficult item to obtain information about, only 7 percent of the sample refused to answer this question. However, it appears that household income may be somewhat underreported. The largest response category was "$7,000 or less," in which 23 percent of the sample households fell. The next largest portion of the sample reported incomes of "$15,000 to $20,000" (20 percent) followed by 14 percent reporting "$20,000 to $30,000." The categories of "$7,000 to $11,000" and "$11,000 to $15,000" each contained 13 percent of the survey households, while 8 percent reported earnings of "$30,000 or more" per year.

ATTITUDES AND PERCEPTIONS

The survey tapped three categories of attitudes and perceptions of area residents, which will be discussed in this section. First, attitudes toward industrial development will be discussed. Next we will describe respondent attitudes toward the local area or "quality of life" perceptions. Finally, respondents' satisfaction with local public and social services will be presented.

Energy Industry Development Attitudes

A number of questions were asked of respondents concerning their feelings toward the proposed industries in this area, specifically the SRC II Plant, the Round Bottom Coke Plant, the Core Industrial Park, and the Sharon Steel Coke Plant proposed for Fairmont, W.Va. Respondents were asked whether they were in favor of or opposed to the establishment of these industries and how strongly they felt in this regard. Since the questions was asked in reference to all of these proposed industries as a group, it is impossible to determine how the respondents actually felt about each separate project. Therefore, any inferences from the response to this question to the SRC II plant, the Round Bottom Coke Plant, or to any other specific proposed industry, would be inaccurate. (In the larger survey, we will attempt to tap attitudes toward specific projects individually.) The distribution of responses to this question is:

Favor the industries--very strongly	27%	
Favor the industries--strongly	36%	72%
Favor the industries--not too strongly	9%	
Don't Know	14%	
Oppose the industries--not too strongly	2%	
Oppose the industries--strongly	5%	13%
Oppose the industries--very strongly	6%	

Seventy-two percent of the respondents were in favor of this group of industries, 13 percent opposed them, and 14 percent said "don't know."

When asked if they thought these projects would have any effect on the community, 88 percent said "yes." The specific effects that respondents thought these projects will have on the community are:

Effects	Percent of Respondents Who Mentioned*
More jobs	74%
Improve Economy	35%
Pollution	31%
More people	22%
Higher wages	13%
Lower quality of life	11%
More traffic	10%
Crowded schools	7%
Housing shortage	6%
Higher taxes	3%

(*These percentages do not sum to 100 percent because of multiple responses)

Seventy-two percent of the sample respondents felt that the projects will be mostly good for the community while 14 percent thought the projects will be mostly bad (14 percent responded "don't know").

Respondents were also asked if the projects should be developed for the good of the country. To this question, 84 percent said yes, 9 percent said yes if certain conditions were met, and 4 percent said no (three percent "did not know").

Most respondents felt that "something should be done" to get the community ready for these industries (82 percent). When asked who should be responsible for doing things to get the community ready for these projects, responses were as follows:

Responsible Party	Percent of Respondents Who Mentioned*
County Government/County Commission	35%*
Project Personnel/DOE/Gulf	26%
State Government	19%
Citizens/Alliances	17%
Federal Government	12%
WVU	6%
Others	61%

(*These percentages do not sum to 100 percent because of multiple responses.)

Area residents generally felt that people who live in the areas where the projects are to be built should have a say in the planning and decision-making about the projects (86 percent). However, when asked how much say citizens should have, most respondents answered that they should just influence some decisions (79 percent) as opposed to making all decisions (1 percent), influencing all decisions (14 percent) or having no influence (7 percent). Those who responded that citizens should not have a say in decision-making regarding the industries often stated that citizens simply were not knowledgeable enough to make the right decisions, and that planning and decision-making should be left to experts.

Attitudes Toward Local Area

Respondents were questioned as to their feeling toward their community in an attempt to measure satisfaction with the local area and perceptions about the quality of life.

The majority of respondents were "proud" of the local area (59 percent), whereas 25 percent were "very proud" and 14 percent were "not very proud." Most respondents of the area felt that people in the local area are generally "friendly" (54 percent) or "very friendly" (44 percent). Only 2 percent of the respondents thought people in the local area are "unfriendly." Moreover, when asked what they like most about the community, respondents usually said "the rural atmosphere and peacefulness" (43 percent) or "people (friendly, helpful)" (27 percent). Nine percent of the sample liked the availability of WVU most about the community, while 7 percent liked the convenience of the city while living in the country. Other attributes mentioned included recreational facilities and variety of employment opportunities.

The majority of respondents felt that the local area is a good place to raise children (59 percent), 14 percent said "not very good," and 27 percent said "bad". Most people perceived life in the local area to be generally staying about the same (50 percent) as opposed to improving (34 percent) or going downhill (13 percent).

The problems in the community most often mentioned were:

Problems	Percent of Respondents Who Mentioned*
Parking/traffic	20%
Roads	17%
Vandalism/crime	13%
Housing/rentals	10%
Public utilities	7%
Lack of recreational facilities	4%
Others	31%

(*These percentages do not sum to 100 percent because of multiple responses.)

The 31 percent who said "other" mentioned such problems as dogs, lack of social services, lack of employment, poor community relations, strip mining, and pollution and litter.

In order to ascertain what people's priorities would be in terms of improving the community, respondents were asked how $10,000 could best be spent in the local area. Because this is a specific and rather small sum of money, many people felt that not much could be improved. However, the following responses do indicate areas which residents felt are in need of attention, even though the responses may be tempered by the amount of money specified.

Areas for Improvement	Percent of Respondents Who Mentioned
Roads/traffic/parking	36%
Recreational facilities	17%
Social and public services	9%
Schools	8%
Beautify downtown	7%
Community building	5%
Better housing	3%
Job opportunities	2%
Garbage/litter clean-up	2%
Give to the needy	2%
Other	7%

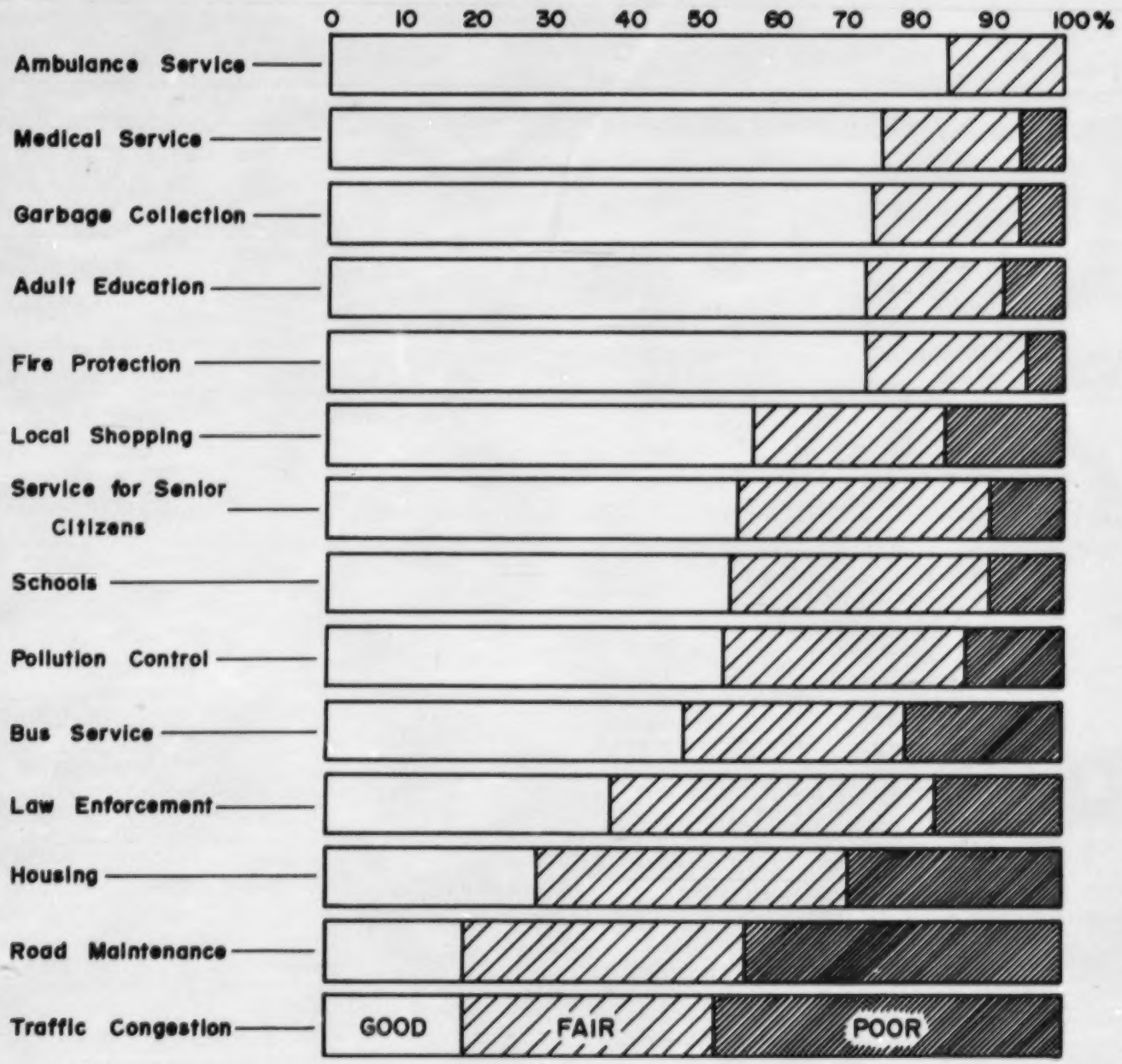
Satisfaction With Local Services

To ascertain local residents' satisfaction with social and public services, respondents were asked to rate as "good," "fair" or "poor" a number of community services. The results are displayed in Figure 1.

Local residents seem to be most satisfied with ambulance service (84 percent rated it as "good" and no one rated it as "poor"), medical services (75 percent said "good"), garbage collection (74 percent rated as "good"), and fire protection (rated "good" by 73 percent).

The services with which most people appeared to be the least satisfied are traffic control (46 percent rated as "poor") and road maintenance (43 percent rated as "poor"). It is likely that this high proportion of dissatisfaction with roads was due partly to the fact that the survey was conducted during the summer of 1980 when a great deal of traffic congestion was caused by the construction of roads to the new WVU football stadium in Morgantown. Results from the larger survey will allow us to ascertain how much dissatisfaction with roads was due to this construction.

Figure I. Assessment of the Quality of Local Services



Summary of Attitudes and Perceptions

In summary, a majority of the sample interviewed were in favor of the proposed industries, and most felt that the projects will be mostly good for the community as well as for the country. The respondents generally felt that something should be done to ready the community for the industries, but there was a variety of answers as to whose responsibility it is to make these preparations. Most residents surveyed thought citizens should have a say in the planning and decision making process with respect to these projects, but most felt that they should only influence some but not all of the decisions.

When questioned about their perceptions of the quality of life in the local area, most citizens stated that they were proud of the area, that people in the locality are "friendly" or "very friendly" and that it is a "good" or "very good" place to raise children. The residents generally felt that life in the local area is staying about the same or improving and the the rural atmosphere and peacefulness, the people, and the availability of WVU are what they like most about the area.

The biggest problems in the community seem to be traffic and roads, crime and vandalism, and housing. Respondents thought that $10,000 could best be spent in improving roads, traffic and parking, recreational facilities, and social and public services.

With regard to public and social services, the residents interviewed felt that the ambulance service, medical services, garbage collection and fire protection are "good" in this area, while traffic control, and road maintenance were rated "poor" by many of the respondents.

DIFFERENTIAL IN ATTITUDES TOWARD NEW INDUSTRIES

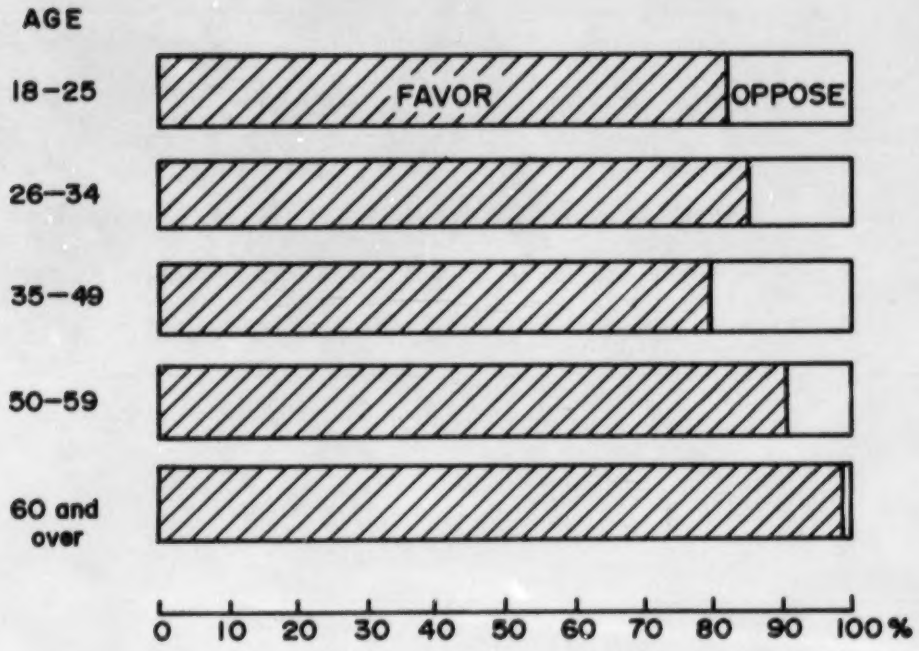
In the last section we examined respondent opinions about developments in the area and found that 72 percent gave a positive answer to the question, "Are you in favor of or opposed to these projects?" while 13 percent gave a negative answer (14 percent responded "don't know"). In this section, the data will be examined to find out whether people with different characteristics hold different opinions on this question. Respondents who answered "don't know" to this question were excluded from the following analysis.

It is important to keep in mind that only 12 of the survey respondents said they were opposed to the proposed industries, therefore, any generalizations from this analysis to the proportion of the population of the survey area opposed to the industries could be misleading.

There is little difference between males and females in their tendency to be for or against the proposed industries. Although females responded positively toward the industries more frequently than males, the difference is very slight. Ninety percent of the female respondents were in favor of the industries, whereas 86 percent of the males favored the industries.

The distribution of attitudes toward new industries by age is presented in Figure 2. Older respondents were more favorable toward the new industries than younger respondents. The average age of survey participants who favored the industrial developments is 55 years while the average age of those opposed is 36 years.

Figure 2. Favoring Versus Opposing New Industries by Age



Similarly, married respondents favored the proposed developments more often than single, separated, or divorced respondents. Ninety-three percent of those who were married were industry supporters. Only 71 percent of the single and 67 percent of the separated and divorced participants were industry supporters. Ninety-five percent of the widowed respondents were in favor of the new industries.

Examining the number of people living in the household (Figure 3), we see that the respondents of larger households tended to favor the developments more frequently than those living alone or with one or two other people. Respondents living alone more frequently voiced opposition to the industries than those in any other household size. This differential holds true also for the number of children the respondent had. Respondents without children were opposed more often than those who had children (Figure 4).

Respondents were asked what type of home they live in and whether they own or rent their home. Ninety percent of those living in single family houses responded favorably toward the industries, as did 89 percent of those living in mobile homes and 79 percent of those residing in apartments. Ninety percent of those owning their own home favored the industries compared to 80 percent for renters.

The bar graph (Figure 5) of attitudes toward new industries by education suggests that those with a college education were more likely to be opposed, while those with less than a high school education were more likely to support the industries.

In contrast to the fairly large difference by educational level, income does not appear to have much effect on attitudes toward develop-

Figure 3. Favoring Versus Opposing New Industries by Number in Household

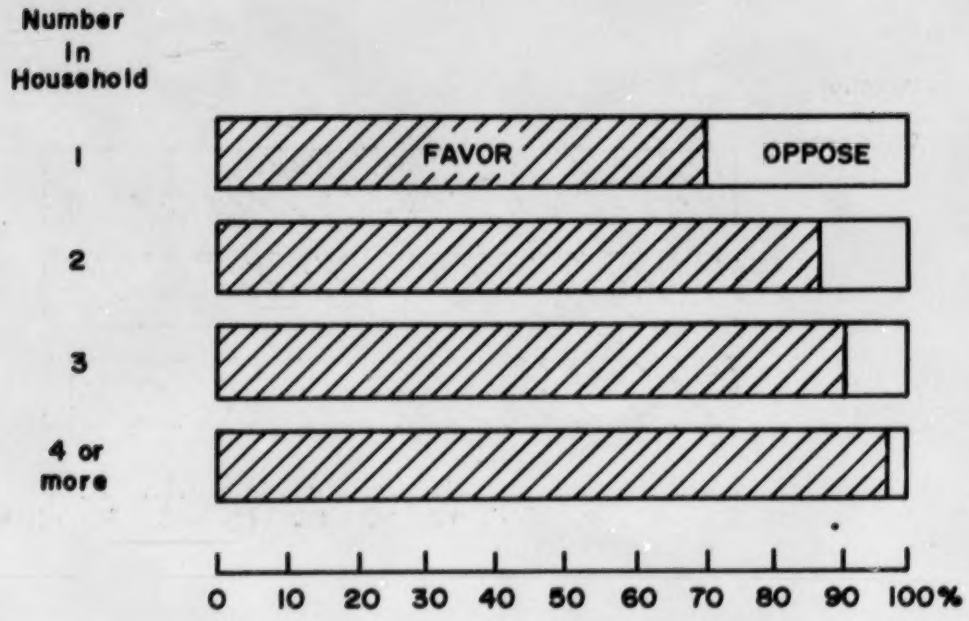


Figure 4. Favoring Versus Opposing New Industries by Number of Children

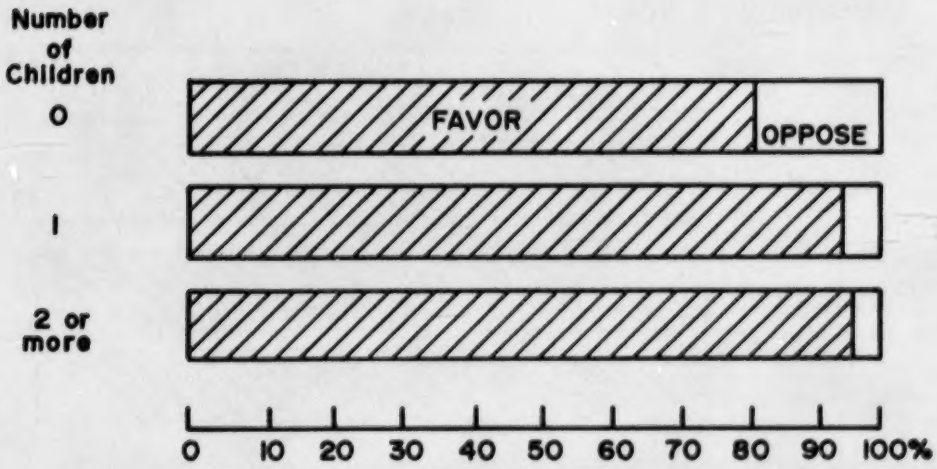
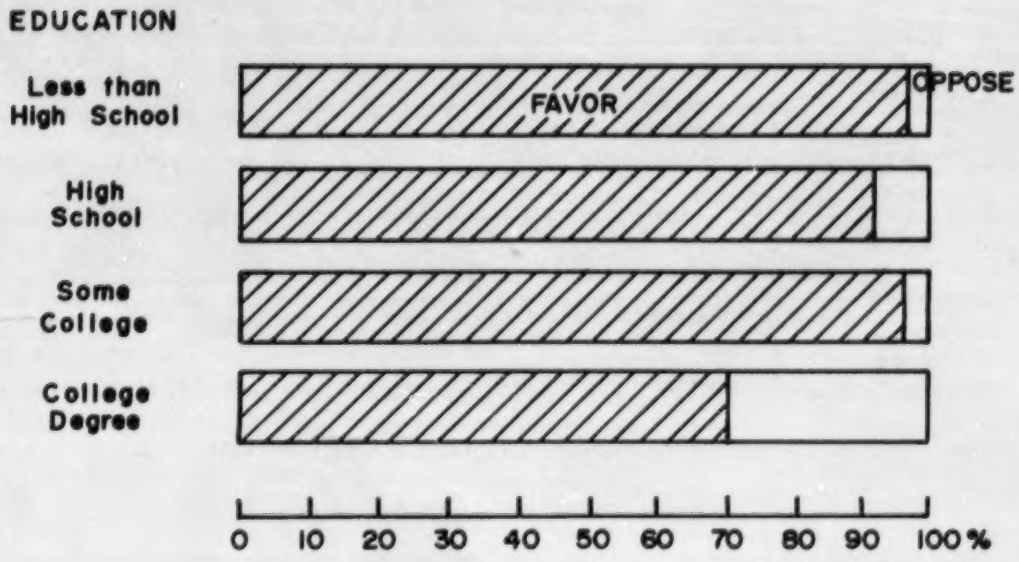


Figure 5. Favoring Versus Opposing New Industries by Education



ment (Figure 6). Since income is generally closely related to age and education, it is surprising that differences by income are so small. This question will be pursued in the larger survey.

With reference to employment, 82 percent of those who are employed favor the industries while 18 percent oppose them. As expected, most respondents who are not employed also supported the proposed developments (93 percent). Eighty-eight percent of those who have held their current job for 5 years or more are in favor of the industries while only 70 percent of those who have worked at their current job for less than 5 years are in favor (Figure 7).

People who reported that they were proud of this area responded favorably toward the industries more frequently than those who were not very proud of the area (Figure 8). Interviewees were also questioned as to how long they have lived in their home county and state. The distribution of these variables is presented in Figures 9 and 10. Of those who have lived in their home county for five years or less, three quarters favored the industries and one-quarter opposed the industries. Of those living in their home county more than thirty years, nearly 90 percent supported the developments while 11 percent were opposed.

This differential is even more pronounced with respect to length of residency in home states. As Figure 10 illustrates, the longer people have lived in their home state, the more likely they are to favor the proposed industries.

The variables of length of residency in home county and in home state, length of time at one's current job, and education seem to explain more of the variance in industrial support than the other variables considered. Respondents who have less than a high school education, those

Figure 6. Favoring Versus Opposing New Industries by Family Income

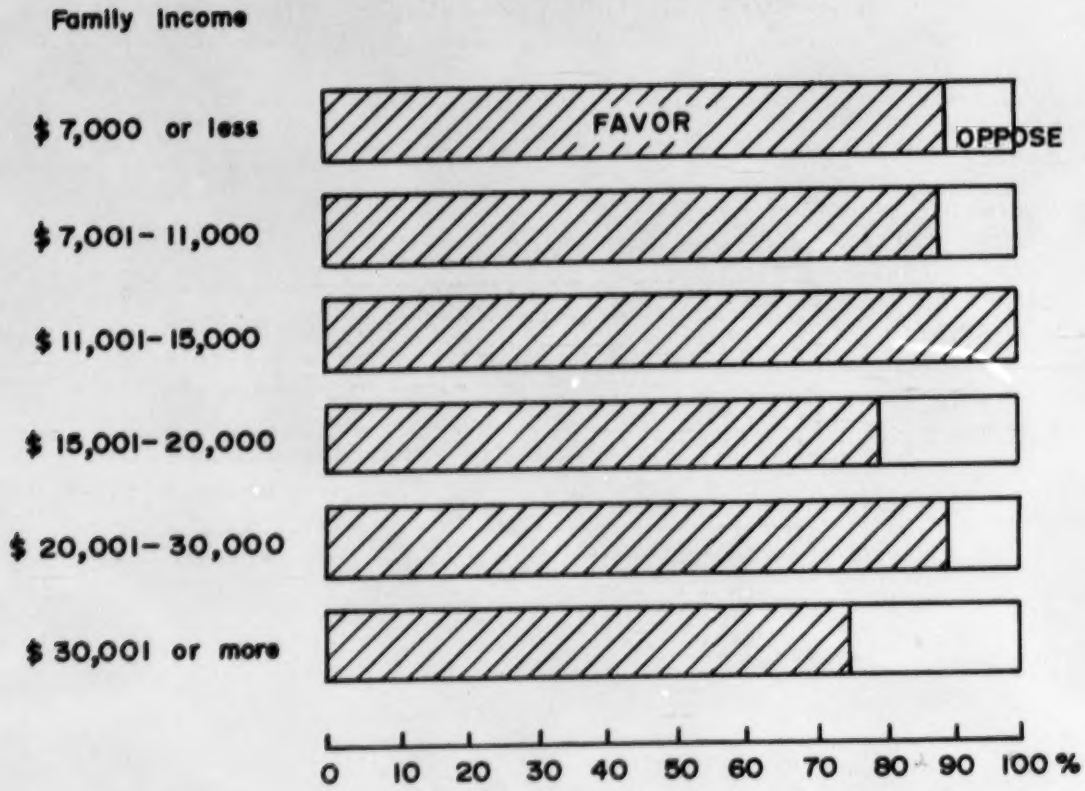


Figure 7. Favoring Versus Opposing New Industries by Length of Time Worked at Current Job

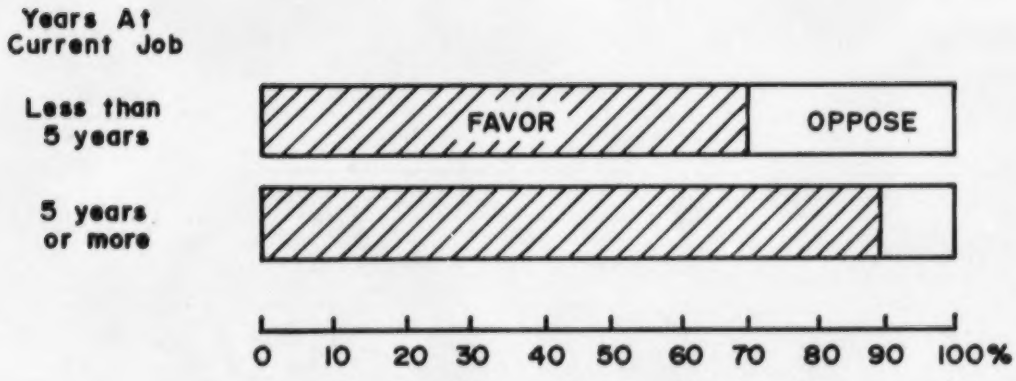


Figure 8. Favoring Versus Opposing New Industries by How Proud of Local Area

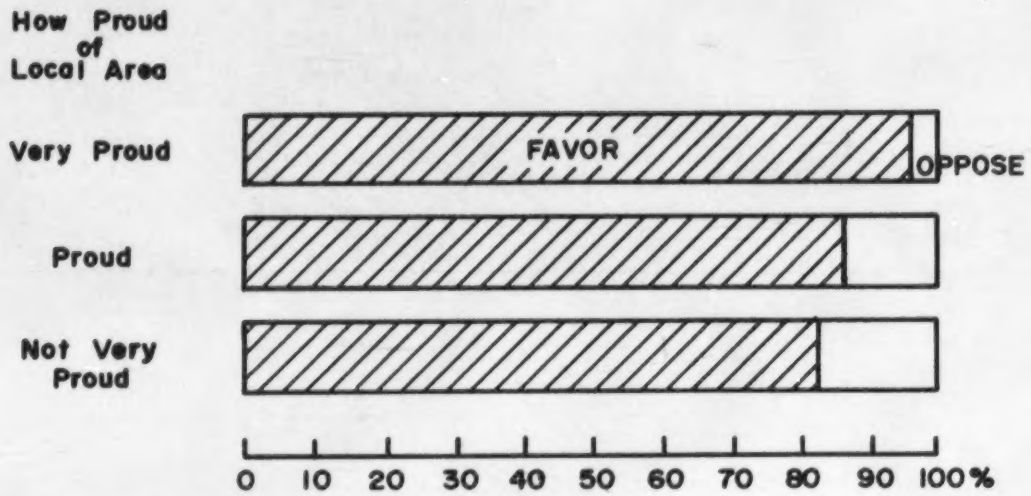


Figure 9. Favoring Versus Opposing New Industries by Length of Residency in County

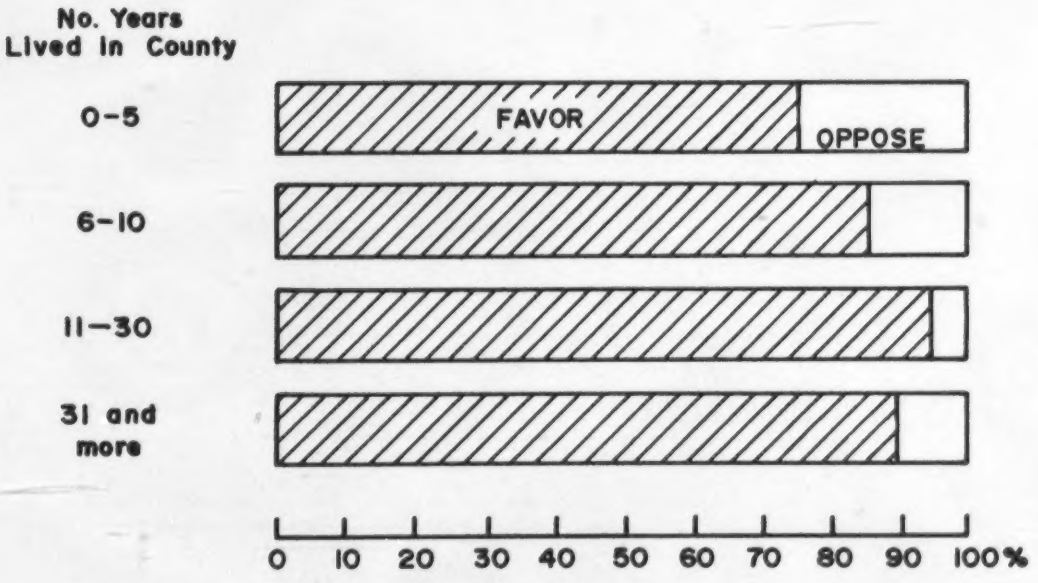
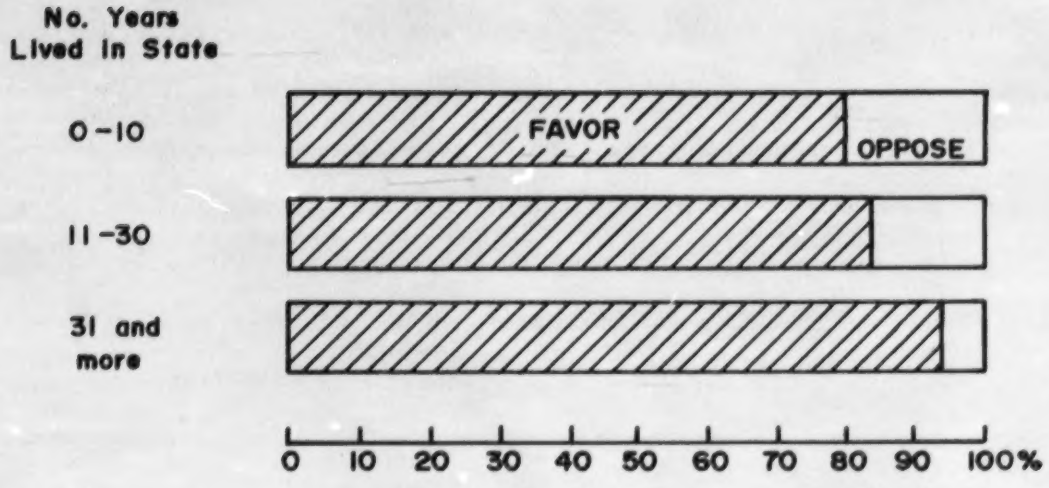


Figure 10. Favoring Versus Opposing New Industries by Length of Residency in State



who lived in their home county and state for a long period of time and those who have worked at the same job for five or more years were more likely to support the proposed industries.

DISCUSSION AND IMPLICATIONS FOR FURTHER STUDY

The results of this pilot survey lead us to believe that the majority of residents who live in the area that will feel the effects of the construction and operation of several new energy related industrial developments, generally support these proposed industries. It also appears that groups of residents with certain socioeconomic characteristics in common are more supportive of these developments than others. Older people and people with less education seem to support the industries more than younger residents and those with a college education. Respondents who have lived in their home county and state for longer periods of time voiced support for the industries more frequently than people who have lived in the area for only a few years. Single people and residents without children appear more supportive of the industries and respondents who have worked at their current job for five years or more tend to indicate support for the proposed industries more than those who have held their jobs for a shorter period of time.

Although these relationships appear in this survey, insufficient data were collected to allow for statistical testing of these relationships or for generalizing the results to the entire impact area. Consequently, these relationships, among others, will be examined more closely in the larger survey.

The pilot survey data also lead us to believe that there may be an underlying factor influencing the relation between these demographic variables and support for the industries. Residents' dependence on energy-related or coal-related industries for their personal economic well-being may be an antecedent variable to these relationships. In other words, residents who depend directly on the energy industry for employment (e.g., coal-miners, construction workers) or indirectly for consumers of their service or business, are likely to support new energy industries. This group of area residents who depend on the energy industry may be the same group who have the characteristics that appear related to support for industry development (older, lower level of education, longer residency in home county and state, have a family, greater length of time at current job). On the other hand, residents who are not dependent on the energy industry may tend to be opposed to the industries, and may also be younger, have a college education and have lived and held their current job for a shorter period of time. Therefore, the determinant of support for energy developments may not be age, marital status, length of residency, or tenure at current job per se, but rather economic dependence on the energy industry. In the forthcoming social survey we will attempt to measure this hypothesized underlying variable--dependence on energy industry--and to examine its influence on the relationship between these demographic characteristics and support for the proposed new industries.

Information of this type should be useful to the field of social impact assessment of energy developments. By identifying the characteristics of people who are most likely to support new industrial developments, one could identify those areas where the residents would most

readily accept and adapt to new industries, as well as those areas in which the residents would more likely oppose these developments and hence suffer greater negative social impacts. Not only will this kind of information be useful for plant siting and initial decision making, but also for local planning for the mitigation of socioeconomic impacts of energy developments.

The purpose of the forthcoming social survey of the SRC II impact area is twofold. First, as described, we will attempt to identify characteristics of impact area residents that predispose them to support or oppose energy developments. Second, and more imperatively, baseline socioeconomic and attitudinal data will be collected about the area residents in order to monitor the actual impacts of the construction and demonstration phases of the SRC II plant on the area. This should enhance understanding of the kinds of changes that can be expected, and therefore what should be planned for when new energy industries are developed in similar areas of Appalachia.